

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
11 January 2001 (11.01.2001)

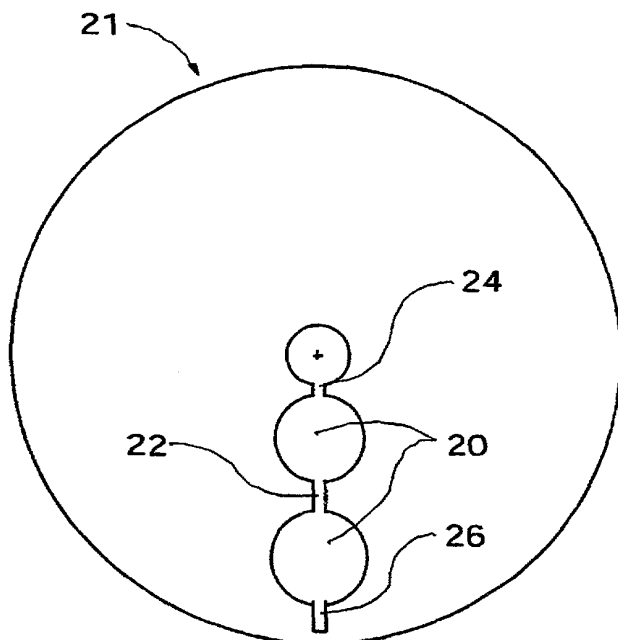
PCT

(10) International Publication Number
WO 01/02737 A1

- (51) International Patent Classification⁷: F15C 5/00, (74) Agents: ROLLINS, Anthony, John et al.; Nycomed Amersham plc, Amersham Laboratories, White Lion Road, Amersham, Buckinghamshire HP7 9LL (GB).
F16K 13/10
- (21) International Application Number: PCT/EP00/06142
- (22) International Filing Date: 30 June 2000 (30.06.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
9902474-7 30 June 1999 (30.06.1999) SE
- (71) Applicant (for all designated States except US): GYROS AB [SE/SE]; Amersham Pharmacia Biotech AB, Björkgatan 30, S-751 84 Uppsala (SE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): DERAND, Helene [SE/SE]; Enstavagen 33, S-187 35 Taby (SE). ANDERSSON, Per [SE/SE]; Hornsgatan 147, S-117 34 Uppsala (SE). LARSSON, Anders [SE/SE]; Tapetserarvagen 14, S-167 72 Bromma (SE).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:
— With international search report.
— Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

[Continued on next page]

(54) Title: POLYMER VALVES



(57) Abstract: The invention relates to a method of controlling flow of liquids in a micro channel structure. It comprises providing in said micro channel structure plugs (34) of polymer material in said structure, said polymer material in a first state blocking said channel from liquid flow, and in a second state providing a free path-way (32) for liquid flow. Energy is selectively applied so as to cause said polymer to enter a desired one of said first or second states. It also relates to a micro channel valve system, comprising a plurality of such plugs (34). Additionally it comprises a chemical reactor, comprising a plurality of micro chambers interconnected by micro channels, having a valve system according to the invention.

WO 01/02737 A1